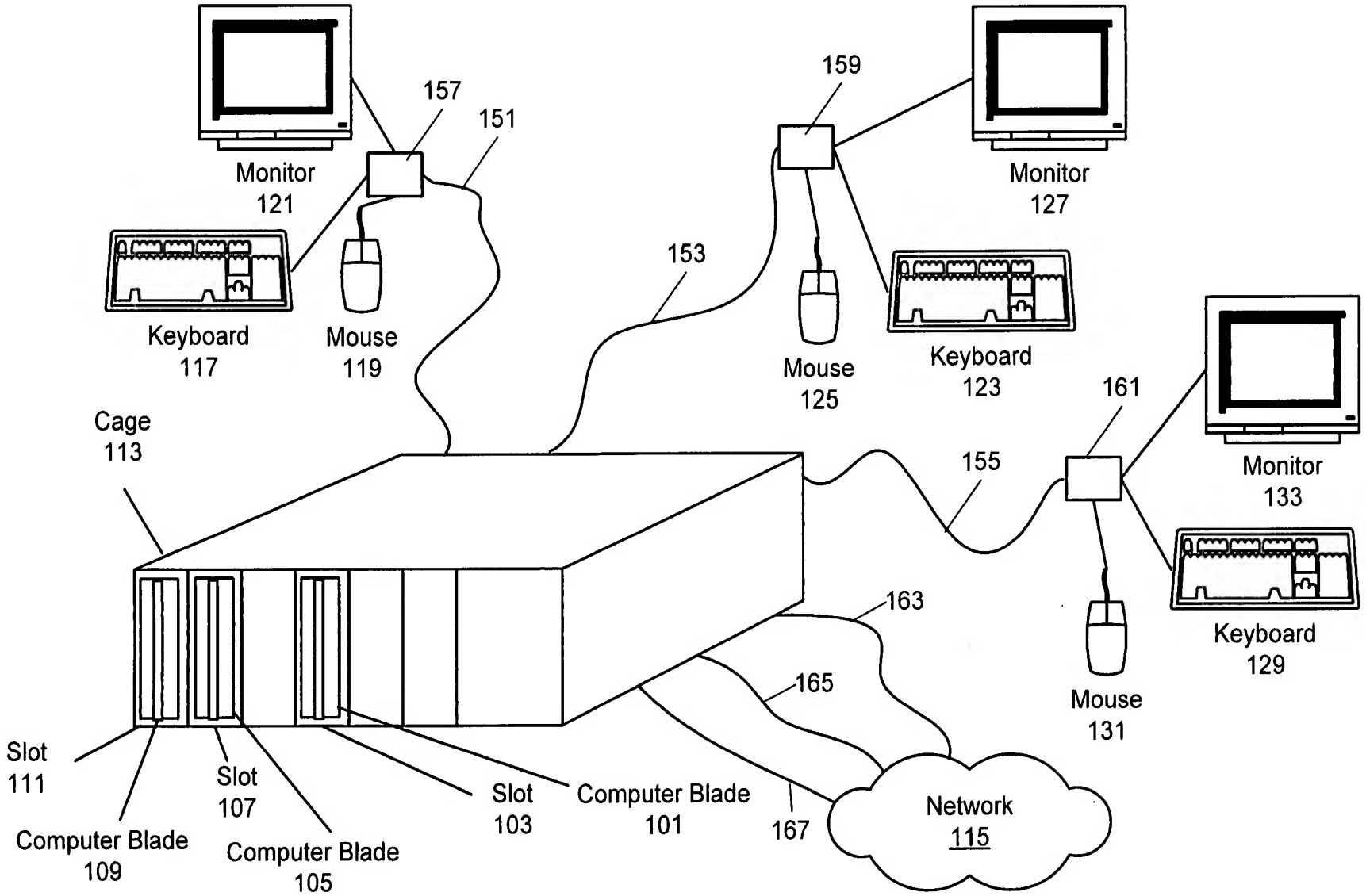
Monitor
121
157
151
Keyboard
117
Mouse
119
159
Monitor
127
153
Mouse
125
Keyboard
123
161
Monitor
133
Cage
113
155
Keyboard
129
163
Mouse
131
165
Slot
111
Slot
107
Slot
103
Computer Blade
101
Computer Blade
109
Computer Blade
105
167
Network
115

Figure 1

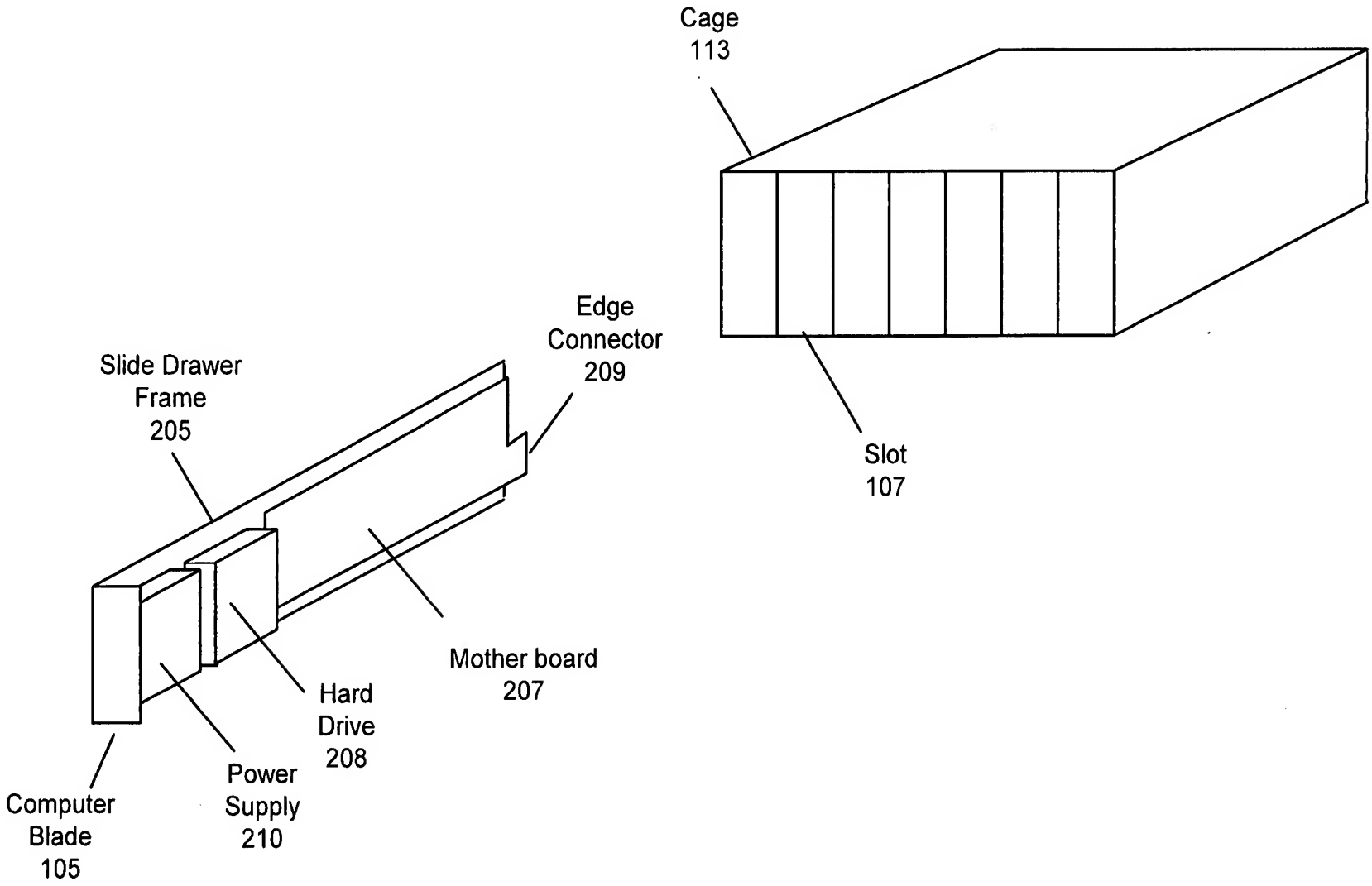
Cage
113
Edge
Connector
209
Slide Drawer
Frame
205
Slot
107
Mother board
207
Hard
Drive
208
Power
Supply
210
Computer
Blade
105

Figure 2

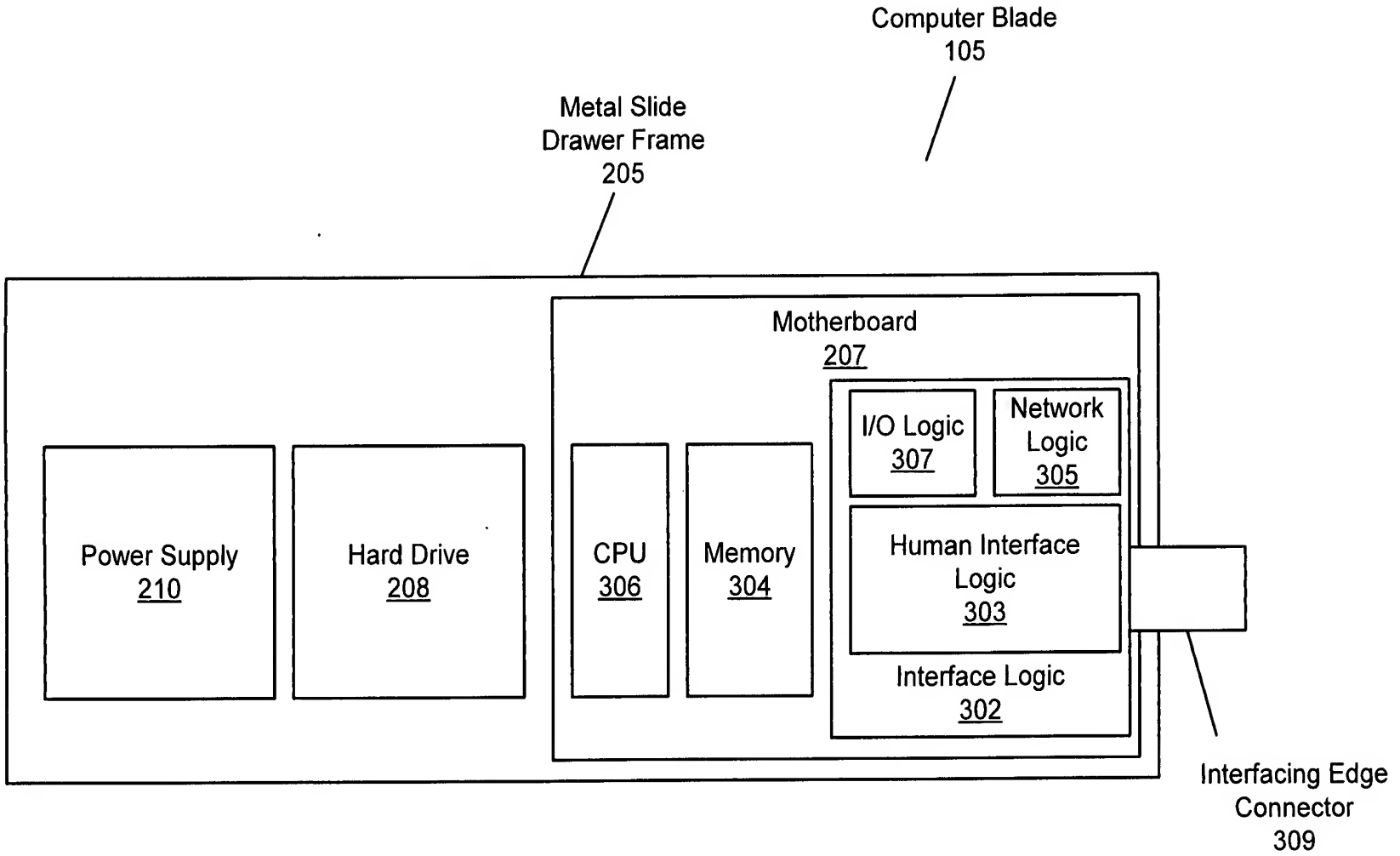
Computer Blade
105
Metal Slide
Drawer Frame
205
Motherboard
207
I/O Logic
307
Network
Logic
305
Power Supply
210
Hard Drive
208
CPU
306
Memory
304
Human Interface
Logic
303
Interface Logic
302
Interfacing Edge
Connector
309

Figure 3

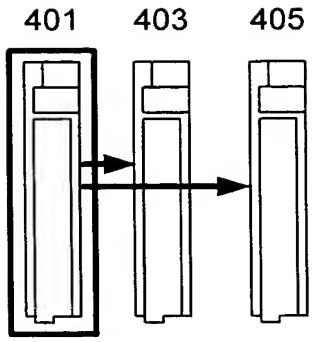

Figure 4a

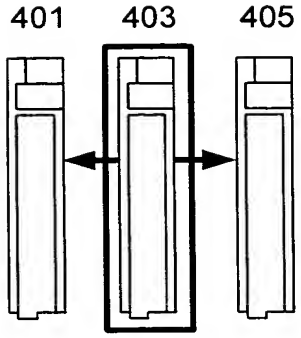

Figure 4b

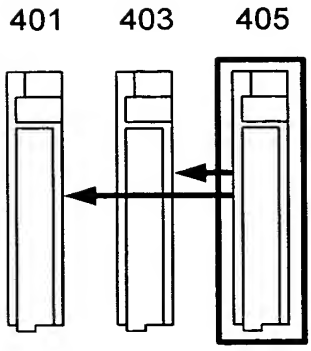

Figure 4c

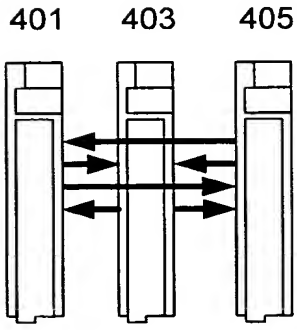

Figure 4d

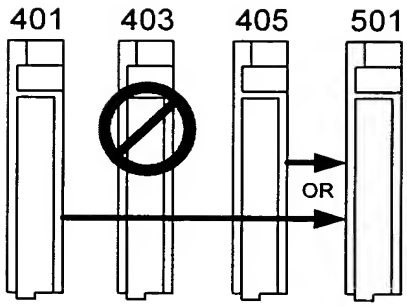

Figure 5

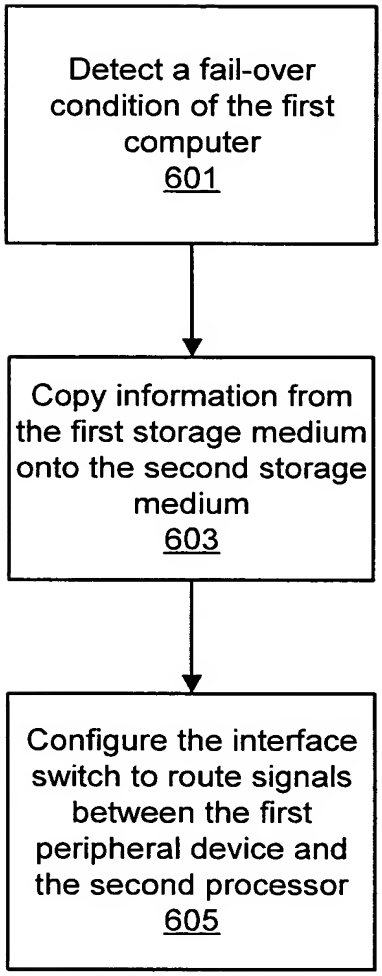
Detect a fail-over condition of the first computer
601
Copy information from the first storage medium onto the second storage medium
603
Configure the interface switch to route signals between the first peripheral device and the second processor
605

Figure 6

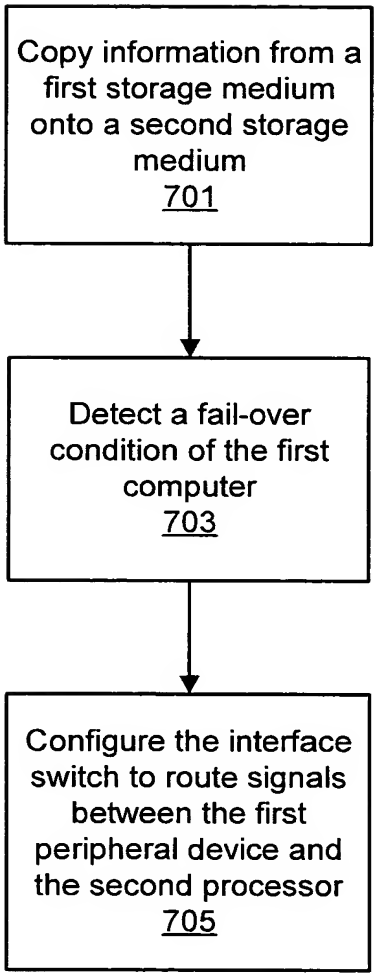
Copy information from a first storage medium onto a second storage medium
701
Detect a fail-over condition of the first computer
703
Configure the interface switch to route signals between the first peripheral device and the second processor
705

Figure 7

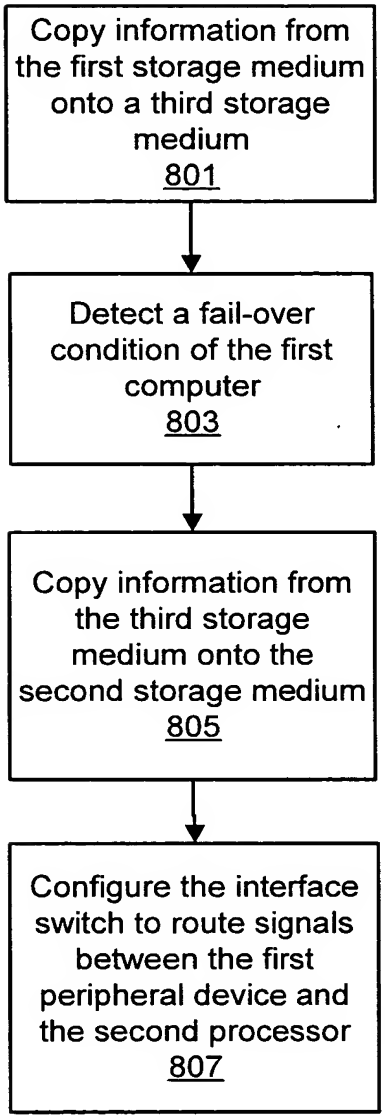
Copy information from the first storage medium onto a third storage medium
801
Detect a fail-over condition of the first computer
803
Copy information from the third storage medium onto the second storage medium
805
Configure the interface switch to route signals between the first peripheral device and the second processor
807

Figure 8

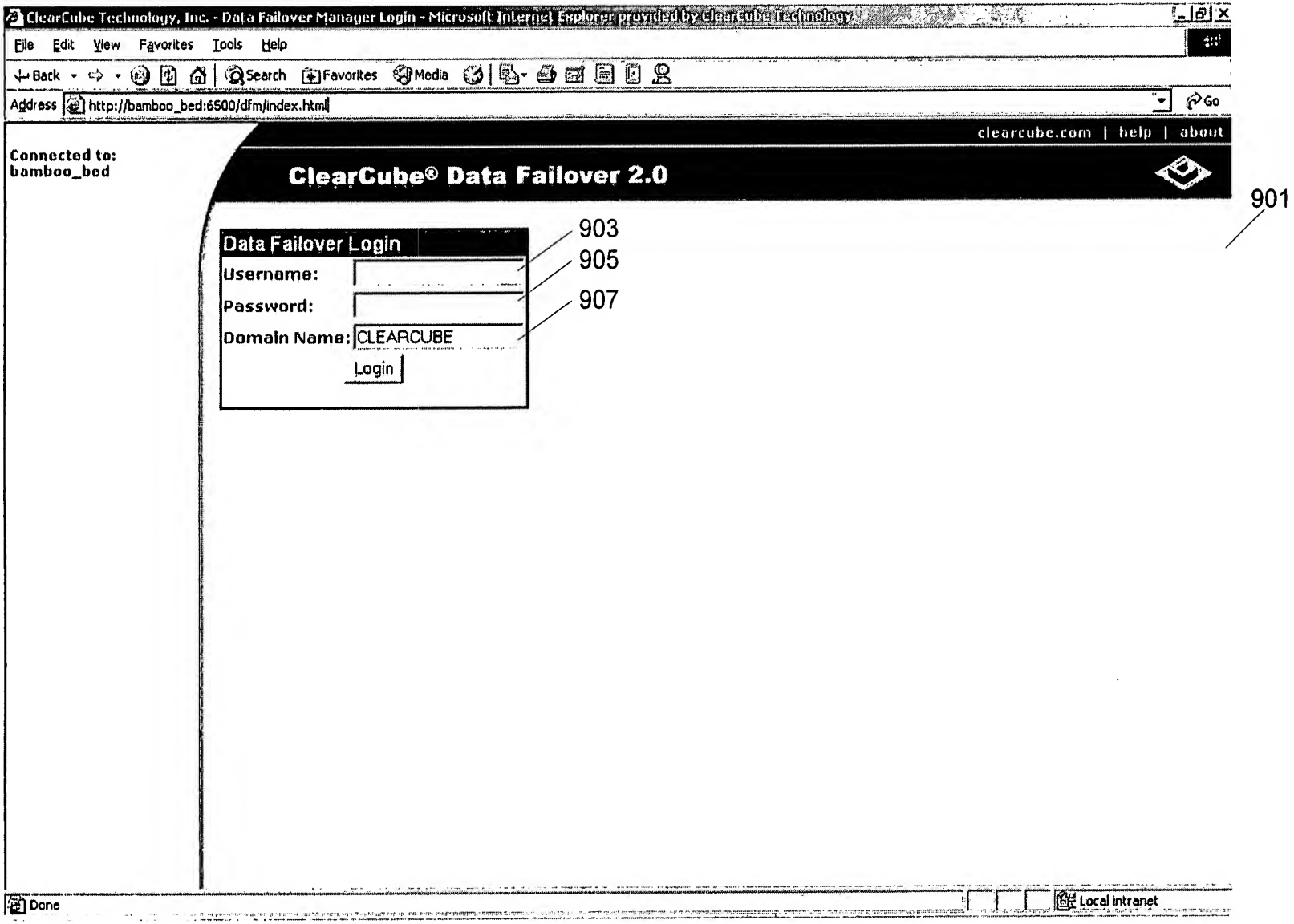
ClearCube Technology, Inc. - Data Failover Manager Login - Microsoft Internet Explorer provided by ClearCube Technology
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://bamboo_bed:6500/dfm/index.html
Go
Connected to:
bamboo_bed
clearcube.com | help | about
ClearCube® Data Failover 2.0
901
Data Failover Login
903
Username:
905
Password:
907
Domain Name: CLEARCUBE
Login
Done
Local intranet

Figure 9

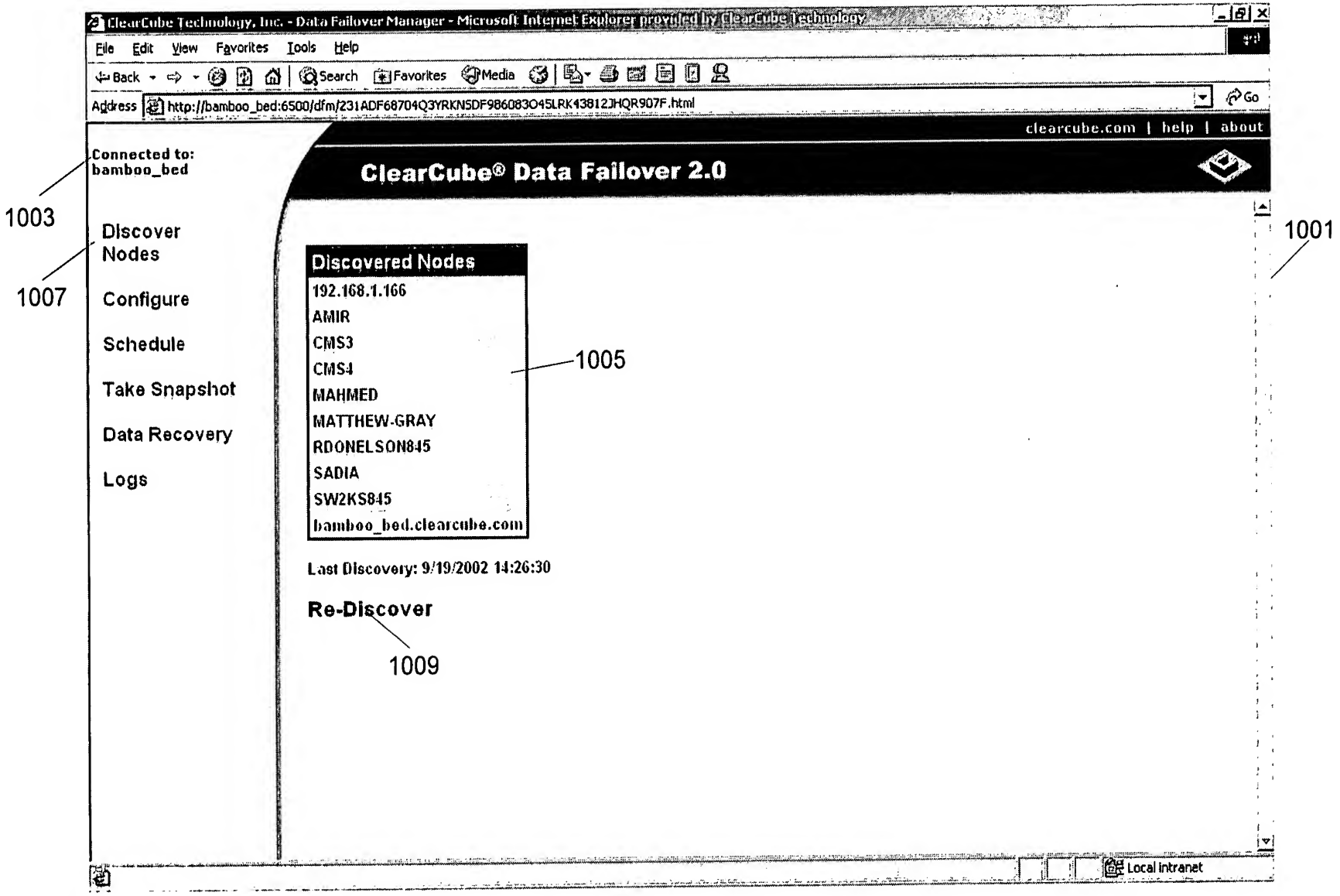
ClearCube Technology, Inc. - Data Failover Manager - Microsoft Internet Explorer provided by ClearCube Technology
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://bamboo_bed:6500/dfm/231ADF68704Q3YRKN5DF986083O45LRK43812JHQR907F.html
Go
clearcube.com | help | about
Connected to:
bamboo_bed
ClearCube® Data Failover 2.0
1003
1007
1001
Discover Nodes
Configure
Schedule
Take Snapshot
Data Recovery
Logs
Discovered Nodes
192.168.1.166
AMIR
CMS3
CMS4
MAHMED
MATTHEW-GRAY
RDONELSON845
SADIA
SW2KS845
bamboo_bed.clearcube.com
1005
Last Discovery: 9/19/2002 14:26:30
Re-Discover
1009
Local intranet

Figure 10

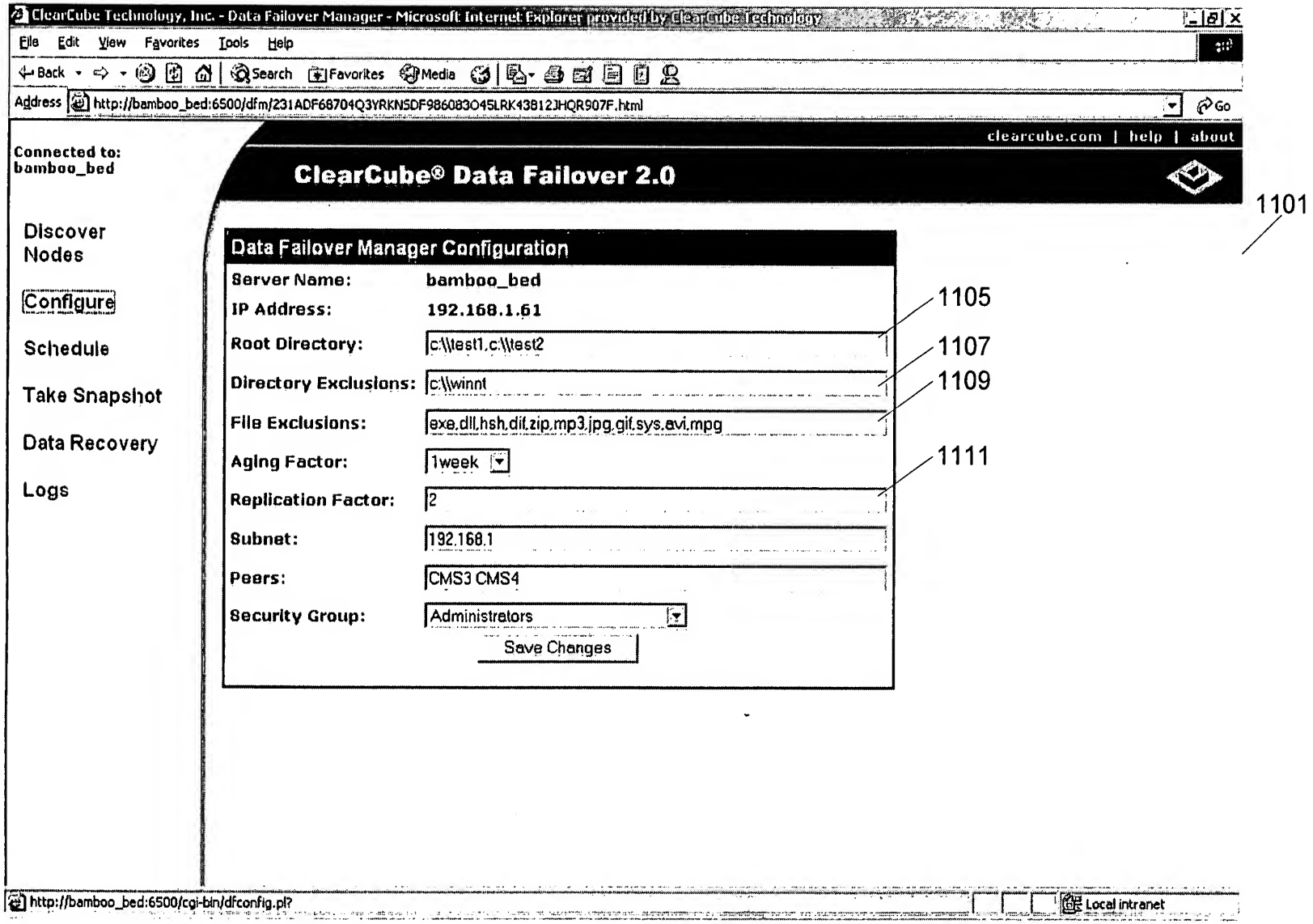
ClearCube Technology, Inc. - Data Failover Manager - Microsoft Internet Explorer provided by ClearCube Technology
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://bamboo_bed:6500/dfm/231ADF68704Q3YRKNSDF986083O45LRK43B12JHQR907F.html
Go
Connected to:
bamboo_bed
clearcube.com | help | about
ClearCube® Data Failover 2.0
1101
Discover Nodes
Configure
Schedule
Take Snapshot
Data Recovery
Logs
Data Failover Manager Configuration
Server Name: bamboo_bed
IP Address: 192.168.1.61
Root Directory: c:\\test1,c:\\test2
1105
Directory Exclusions: c:\\winnt
1107
File Exclusions: exe,dll,hsh,dif,zip,mp3,jpg,gif,sys,avi,mpg
1109
Aging Factor: 1week
1111
Replication Factor: 2
Subnet: 192.168.1
Peers: CMS3 CMS4
Security Group: Administrators
Save Changes
http://bamboo_bed:6500/cgi-bin/dfconfig.pl?
Local intranet

Figure 11

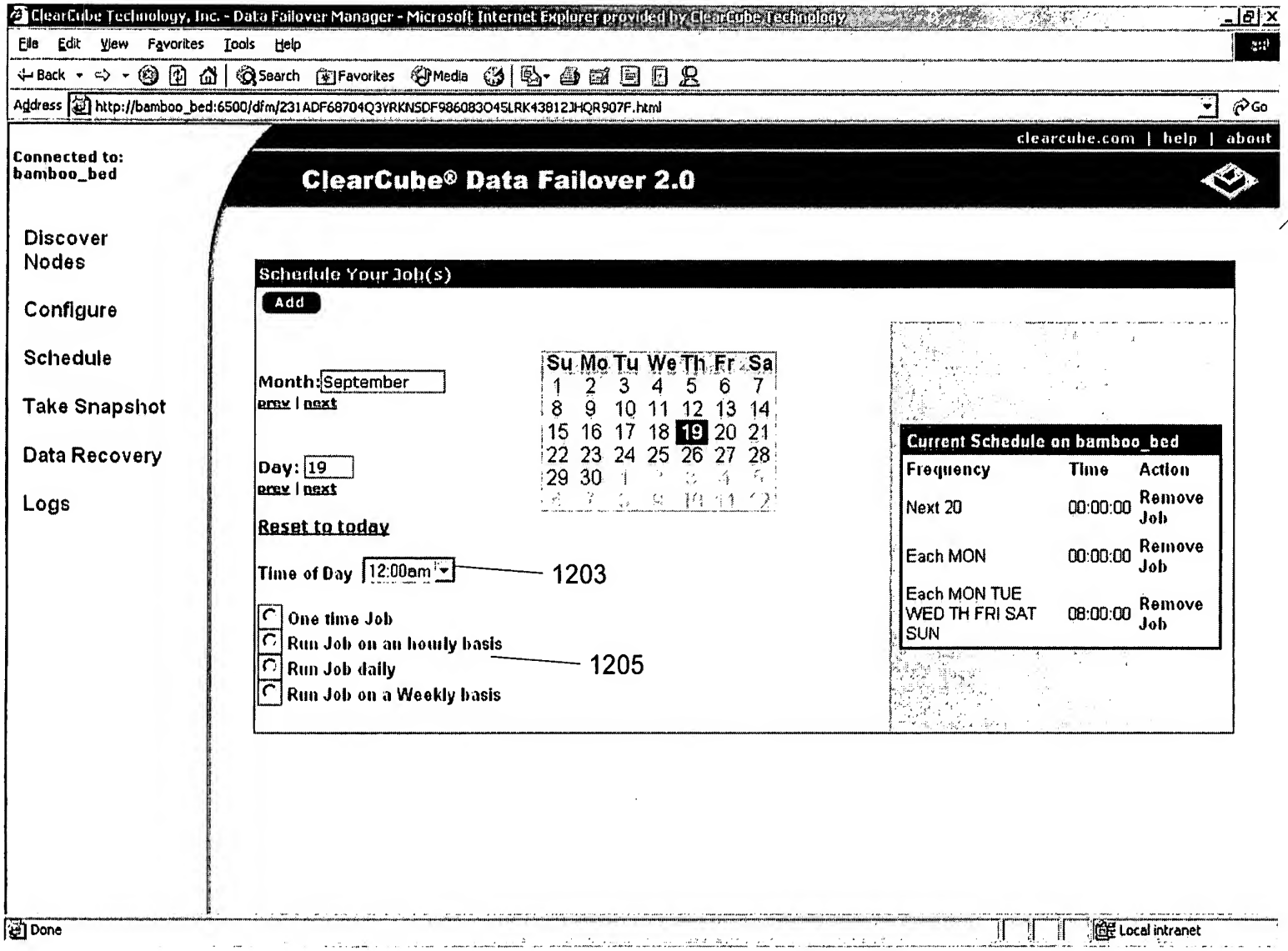
ClearCube Technology, Inc. - Data Failover Manager - Microsoft Internet Explorer provided by ClearCube Technology
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://bamboo_bed:6500/dfm/Z31ADF68704Q3YRKNSDF9860B3O45LRK43812JHQR907F.html
Go
clearcube.com | help | about
Connected to: bamboo_bed
ClearCube® Data Failover 2.0
1201
Discover Nodes
Configure
Schedule
Take Snapshot
Data Recovery
Logs
Schedule Your Job(s)
Add
Month: September
prev | next
Su Mo Tu We Th Fr Sa
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 1 2 3 4 5
Day: 19
prev | next
Reset to today
Time of Day 12:00am
1203
One time Job
Run Job on an hourly basis
Run Job daily
Run Job on a Weekly basis
1205
Current Schedule on bamboo_bed
Frequency Time Action
Next 20 00:00:00 Remove Job
Each MON 00:00:00 Remove Job
Each MON TUE WED TH FRI SAT SUN 08:00:00 Remove Job
Done
Local intranet

Figure 12

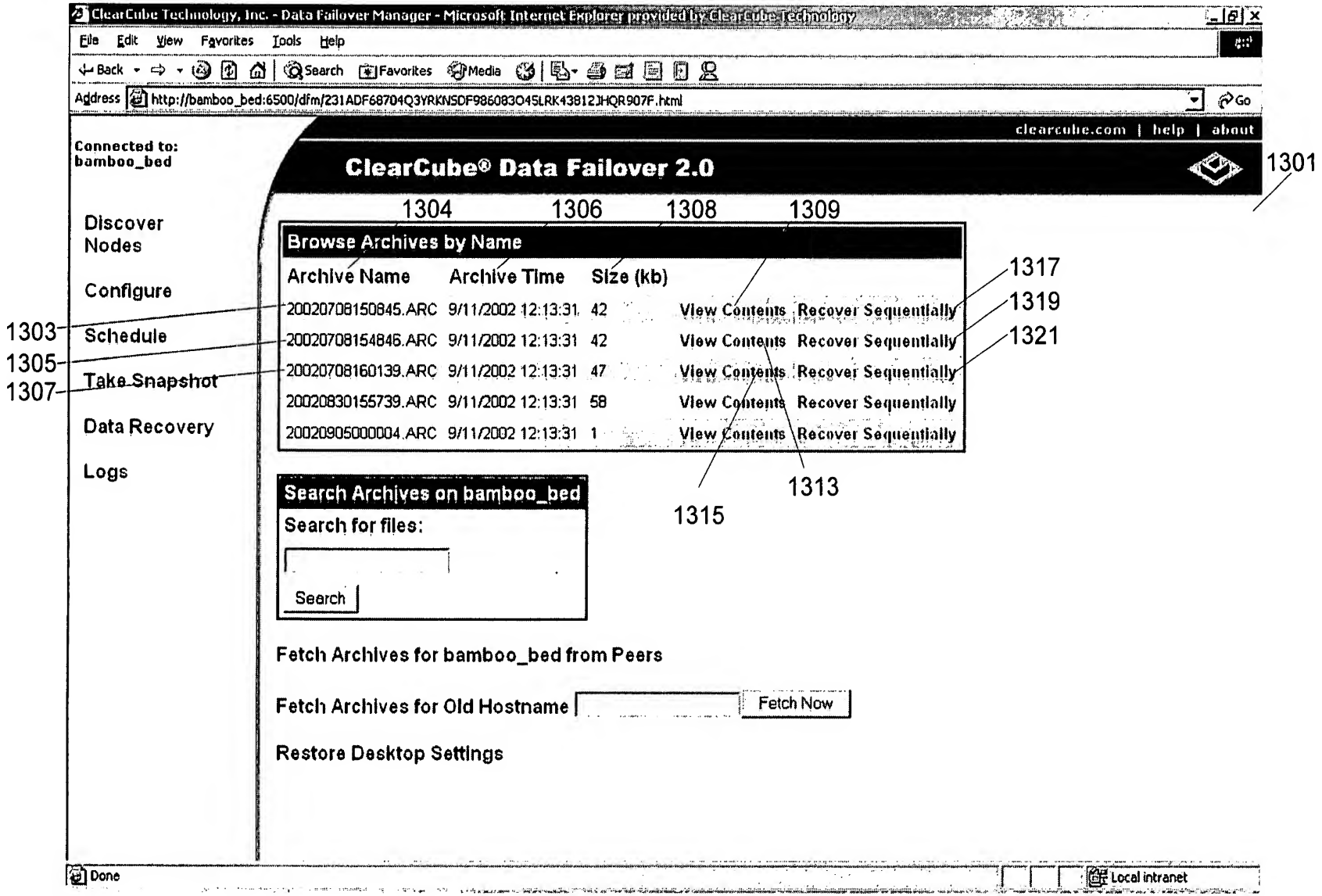
ClearCube Technology, Inc. - Data Failover Manager - Microsoft Internet Explorer provided by ClearCube Technology
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://bamboo_bed:6500/dfm/231ADF68704Q3YRKNSDF986083O45LRK43812JHQR907F.html
Go
clearcube.com | help | about
Connected to: bamboo_bed
ClearCube® Data Failover 2.0
1301
Discover Nodes
Configure
Schedule
Take Snapshot
Data Recovery
Logs
1303
1305
1307
1304
1306
1308
1309
Browse Archives by Name
Archive Name
Archive Time
Size (kb)
20020708150845.ARC 9/11/2002 12:13:31 42 View Contents Recover Sequentially
20020708154846.ARC 9/11/2002 12:13:31 42 View Contents Recover Sequentially
20020708160139.ARC 9/11/2002 12:13:31 47 View Contents Recover Sequentially
20020830155739.ARC 9/11/2002 12:13:31 58 View Contents Recover Sequentially
20020905000004.ARC 9/11/2002 12:13:31 1 View Contents Recover Sequentially
1317
1319
1321
1313
1315
Search Archives on bamboo_bed
Search for files:
Search
Fetch Archives for bamboo_bed from Peers
Fetch Archives for Old Hostname
Fetch Now
Restore Desktop Settings
Done
Local intranet

Figure 13

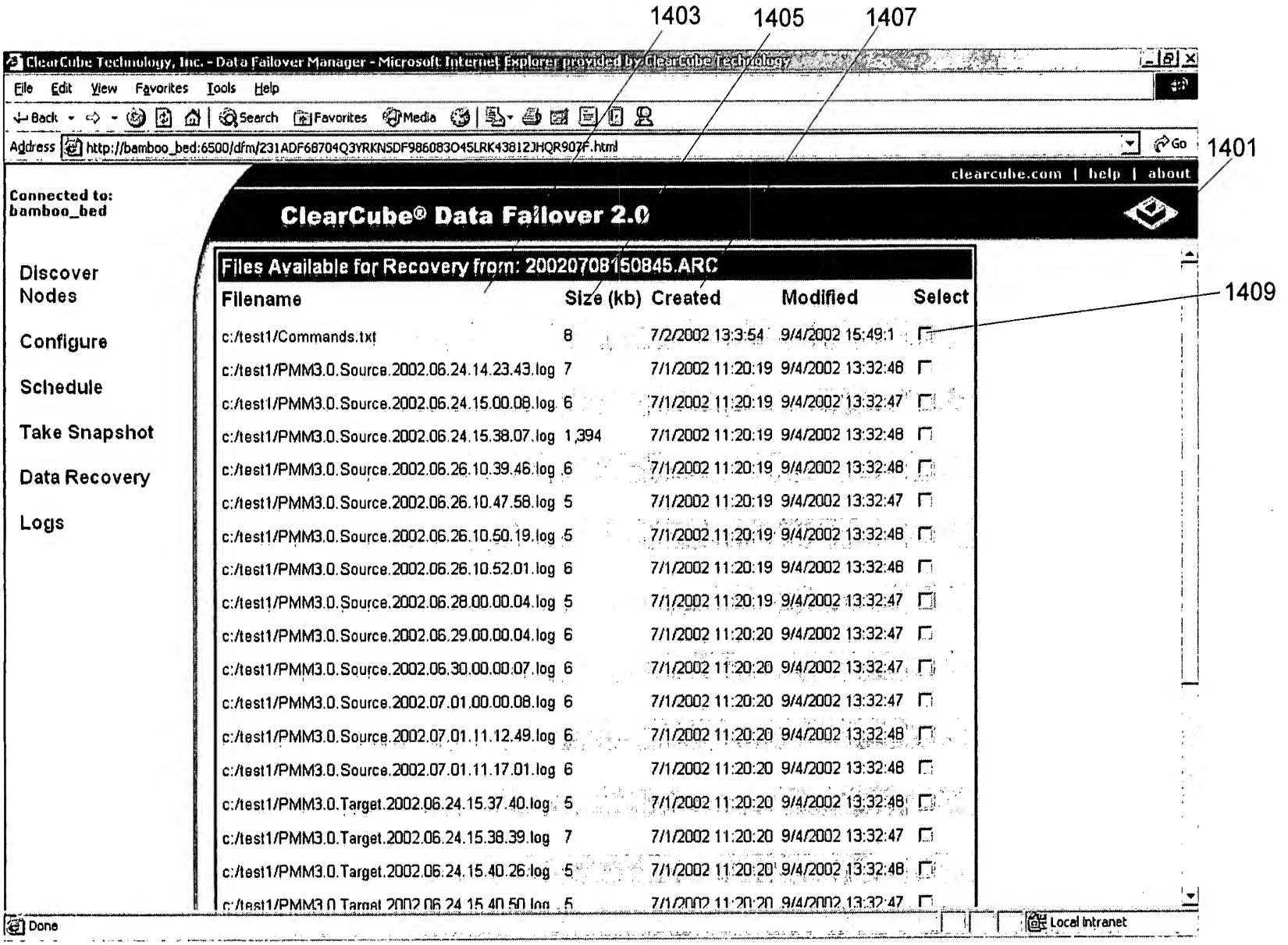
1403
1405
1407
1401
1409
ClearCube Technology, Inc. - Data Failover Manager - Microsoft Internet Explorer provided by ClearCube Technology
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://bamboo_bed:6500/dfm/231ADF68704Q3YRKN5DF986083O45LRK43812JHQR907F.html
Go
clearcube.com | help | about
Connected to:
bamboo_bed
ClearCube® Data Failover 2.0
Discover Nodes
Configure
Schedule
Take Snapshot
Data Recovery
Logs
Files Available for Recovery from: 20020708150845.ARC
Filename Size (kb) Created Modified Select
c:/test1/Commands.txt 8 7/2/2002 13:3:54 9/4/2002 15:49:1
c:/test1/PMM3.0.Source.2002.06.24.14.23.43.log 7 7/1/2002 11:20:19 9/4/2002 13:32:48
c:/test1/PMM3.0.Source.2002.06.24.15.00.08.log 6 7/1/2002 11:20:19 9/4/2002 13:32:47
c:/test1/PMM3.0.Source.2002.06.24.15.38.07.log 1,394 7/1/2002 11:20:19 9/4/2002 13:32:48
c:/test1/PMM3.0.Source.2002.06.26.10.39.46.log 6 7/1/2002 11:20:19 9/4/2002 13:32:48
c:/test1/PMM3.0.Source.2002.06.26.10.47.58.log 5 7/1/2002 11:20:19 9/4/2002 13:32:47
c:/test1/PMM3.0.Source.2002.06.26.10.50.19.log 5 7/1/2002 11:20:19 9/4/2002 13:32:48
c:/test1/PMM3.0.Source.2002.06.26.10.52.01.log 6 7/1/2002 11:20:19 9/4/2002 13:32:48
c:/test1/PMM3.0.Source.2002.06.28.00.00.04.log 5 7/1/2002 11:20:19 9/4/2002 13:32:47
c:/test1/PMM3.0.Source.2002.06.29.00.00.04.log 6 7/1/2002 11:20:20 9/4/2002 13:32:47
c:/test1/PMM3.0.Source.2002.06.30.00.00.07.log 6 7/1/2002 11:20:20 9/4/2002 13:32:47
c:/test1/PMM3.0.Source.2002.07.01.00.00.08.log 6 7/1/2002 11:20:20 9/4/2002 13:32:47
c:/test1/PMM3.0.Source.2002.07.01.11.12.49.log 6 7/1/2002 11:20:20 9/4/2002 13:32:48
c:/test1/PMM3.0.Source.2002.07.01.11.17.01.log 6 7/1/2002 11:20:20 9/4/2002 13:32:48
c:/test1/PMM3.0.Target.2002.06.24.15.37.40.log 5 7/1/2002 11:20:20 9/4/2002 13:32:48
c:/test1/PMM3.0.Target.2002.06.24.15.38.39.log 7 7/1/2002 11:20:20 9/4/2002 13:32:47
c:/test1/PMM3.0.Target.2002.06.24.15.40.26.log 5 7/1/2002 11:20:20 9/4/2002 13:32:48
c:/test1/PMM3.0.Target.2002.06.24.15.40.50.log 5 7/1/2002 11:20:20 9/4/2002 13:32:47
Done
Local Intranet

Figure 14

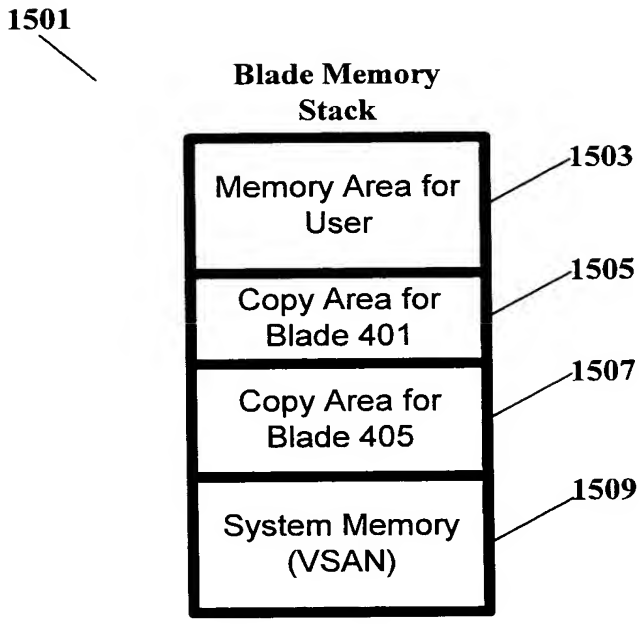
1501
Blade Memory Stack
Memory Area for User
1503
Copy Area for Blade 401
1505
Copy Area for Blade 405
1507
System Memory (VSAN)
1509

Figure 15

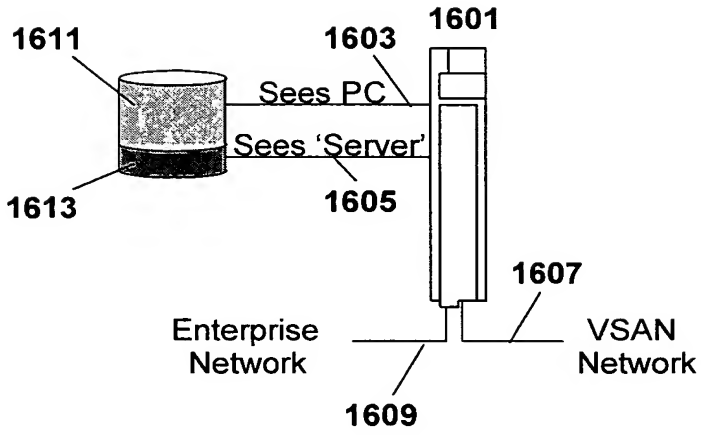
1611
1603
1601
Sees PC
Sees 'Server'
1605
1613
1607
Enterprise
Network
VSAN
Network
1609

Figure 16

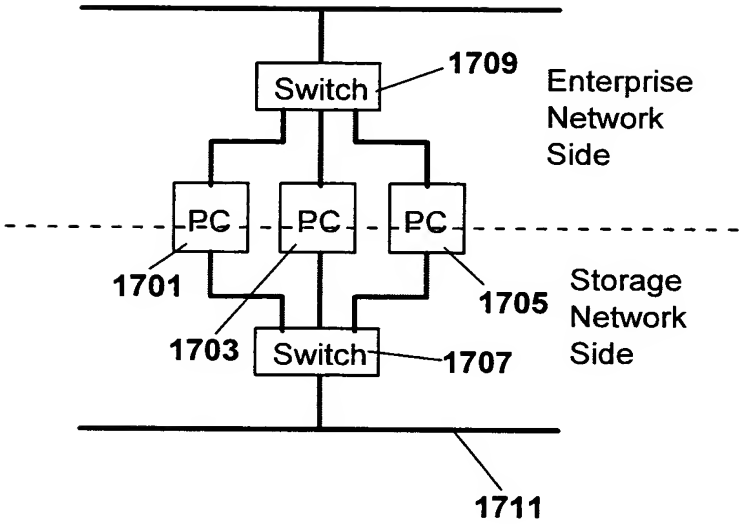
Switch
1709
Enterprise
Network
Side
PC
PC
PC
1701
1703
1705
Storage
Network
Side
Switch
1707
1711

Figure 17

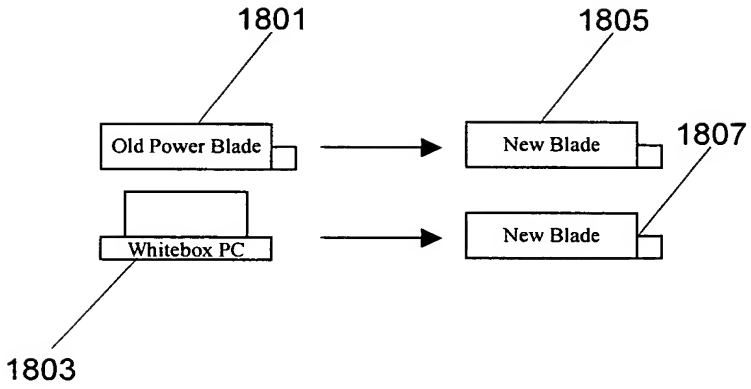

Figure 18

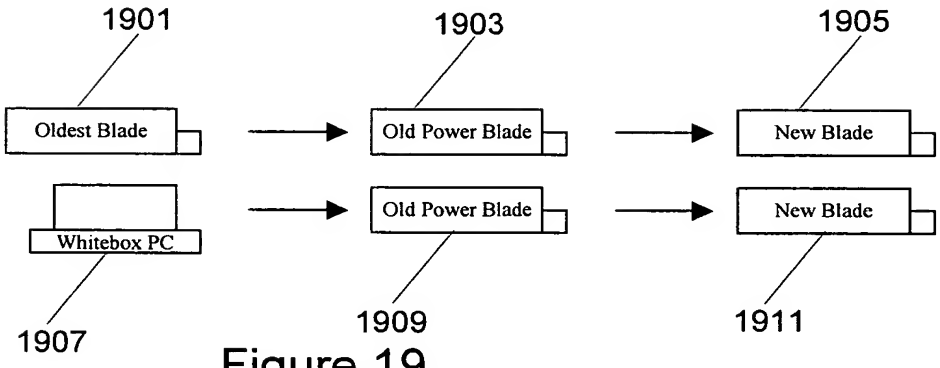

Figure 19

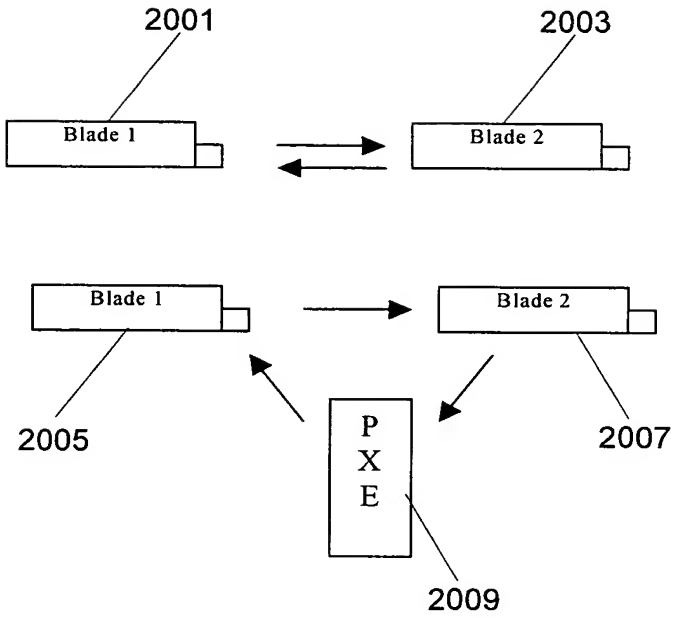

Figure 20

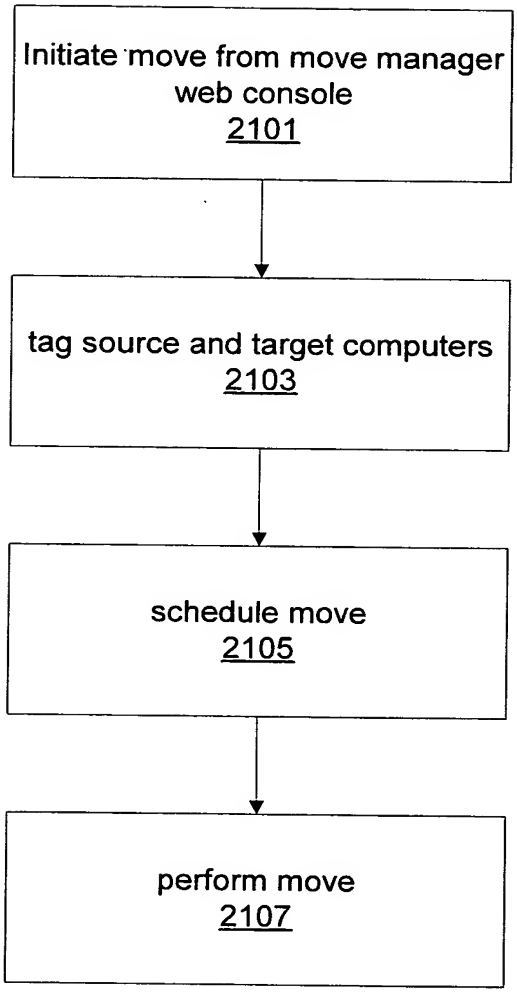
Initiate move from move manager web console
2101
tag source and target computers
2103
schedule move
2105
perform move
2107

Figure 21

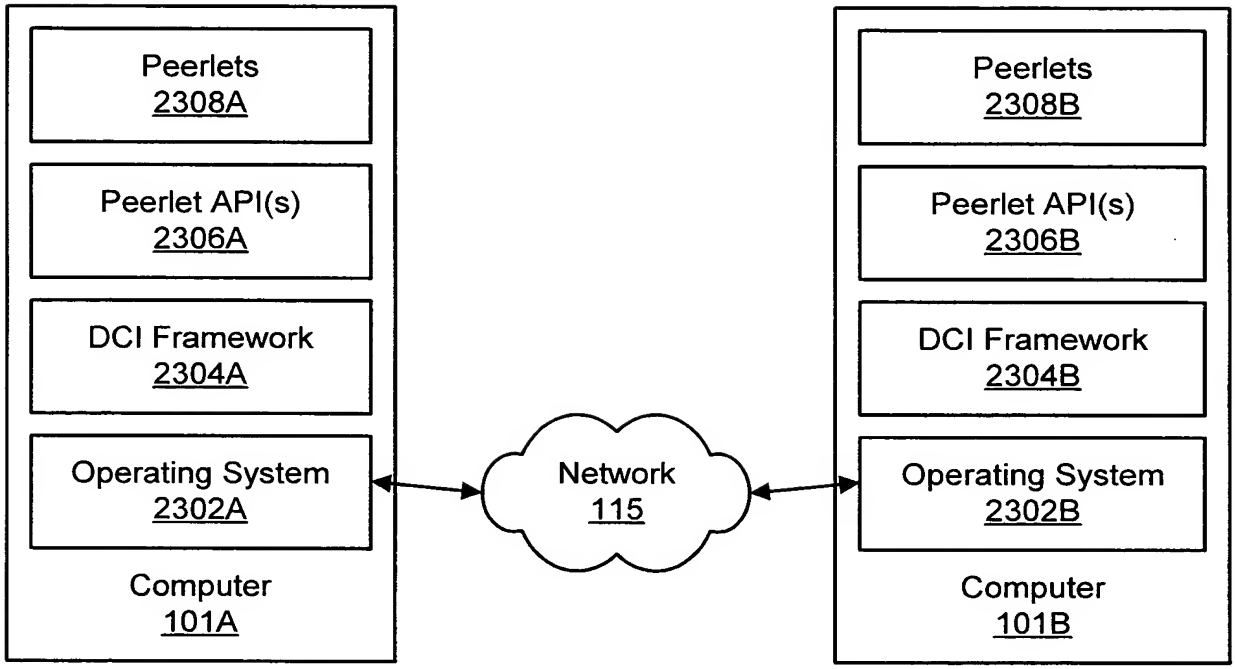
Peerlets
2308A
Peerlet API(s)
2306A
DCI Framework
2304A
Operating System
2302A
Computer
101A
Network
115
Peerlets
2308B
Peerlet API(s)
2306B
DCI Framework
2304B
Operating System
2302B
Computer
101B

Figure 22

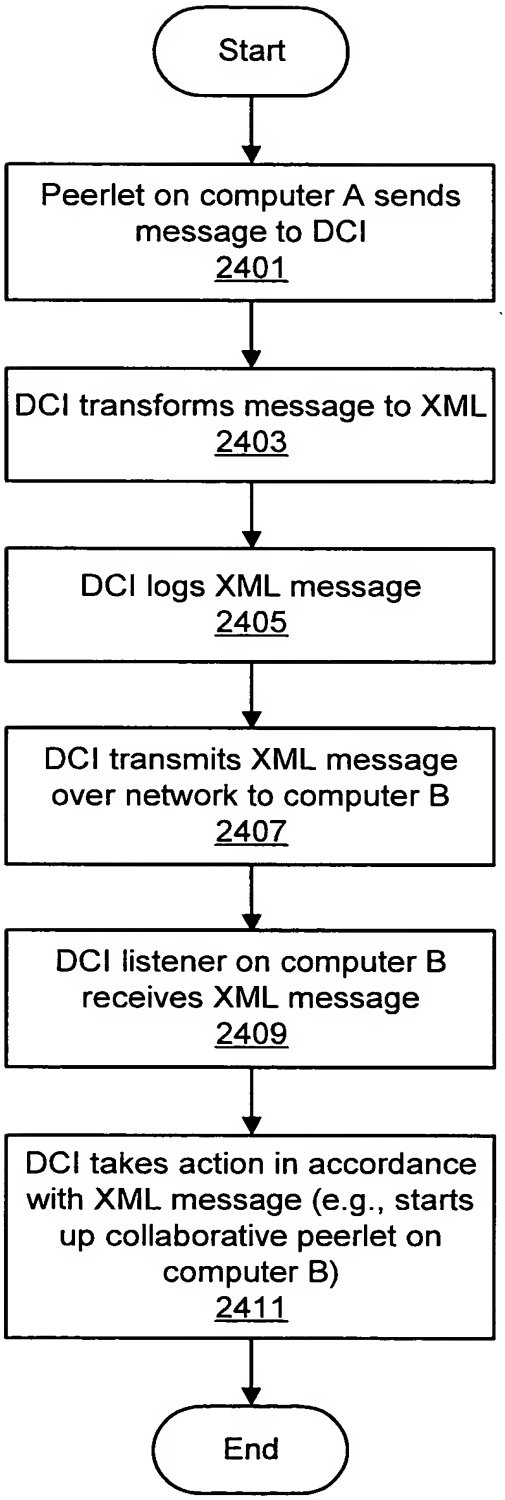
Start
Peerlet on computer A sends message to DCI
2401
DCI transforms message to XML
2403
DCI logs XML message
2405
DCI transmits XML message over network to computer B
2407
DCI listener on computer B receives XML message
2409
DCI takes action in accordance with XML message (e.g., starts up collaborative peerlet on computer B)
2411
End

Figure 23

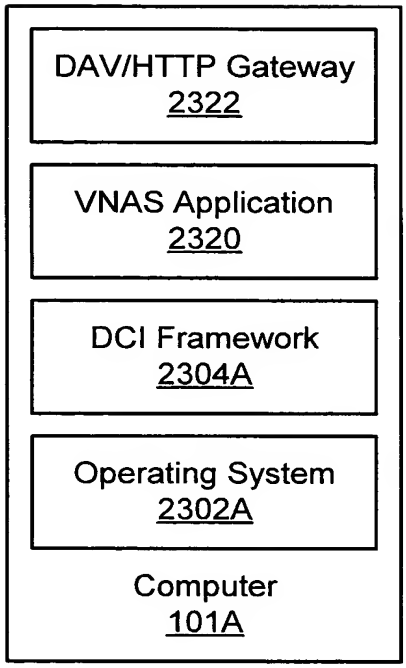
DAV/HTTP Gateway
2322
VNAS Application
2320
DCI Framework
2304A
Operating System
2302A
Computer
101A

Figure 24

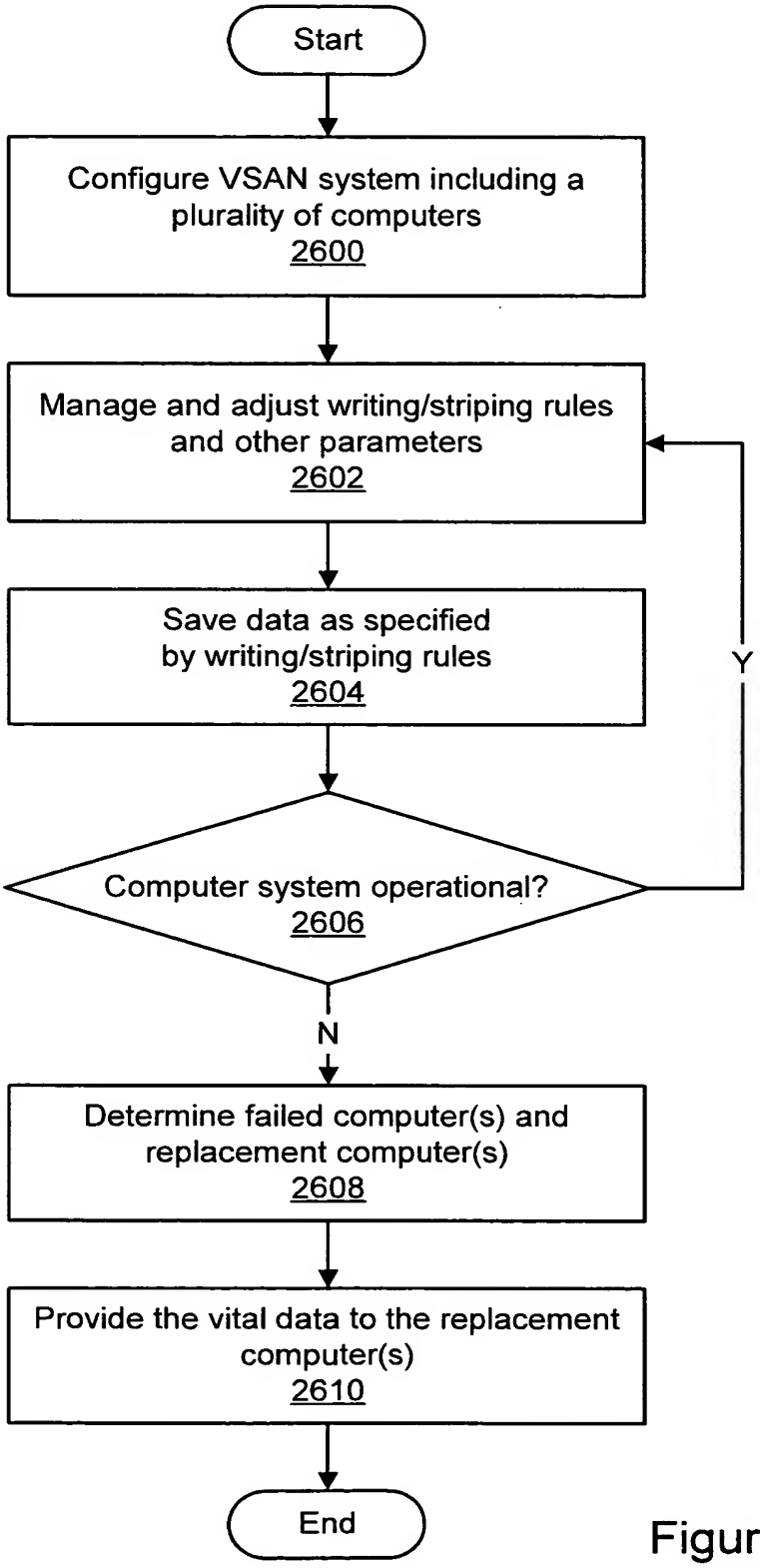
Start
Configure VSAN system including a plurality of computers
2600
Manage and adjust writing/striping rules and other parameters
2602
Save data as specified by writing/striping rules
2604
Computer system operational?
2606
Y
N
Determine failed computer(s) and replacement computer(s)
2608
Provide the vital data to the replacement computer(s)
2610
End

Figure 25

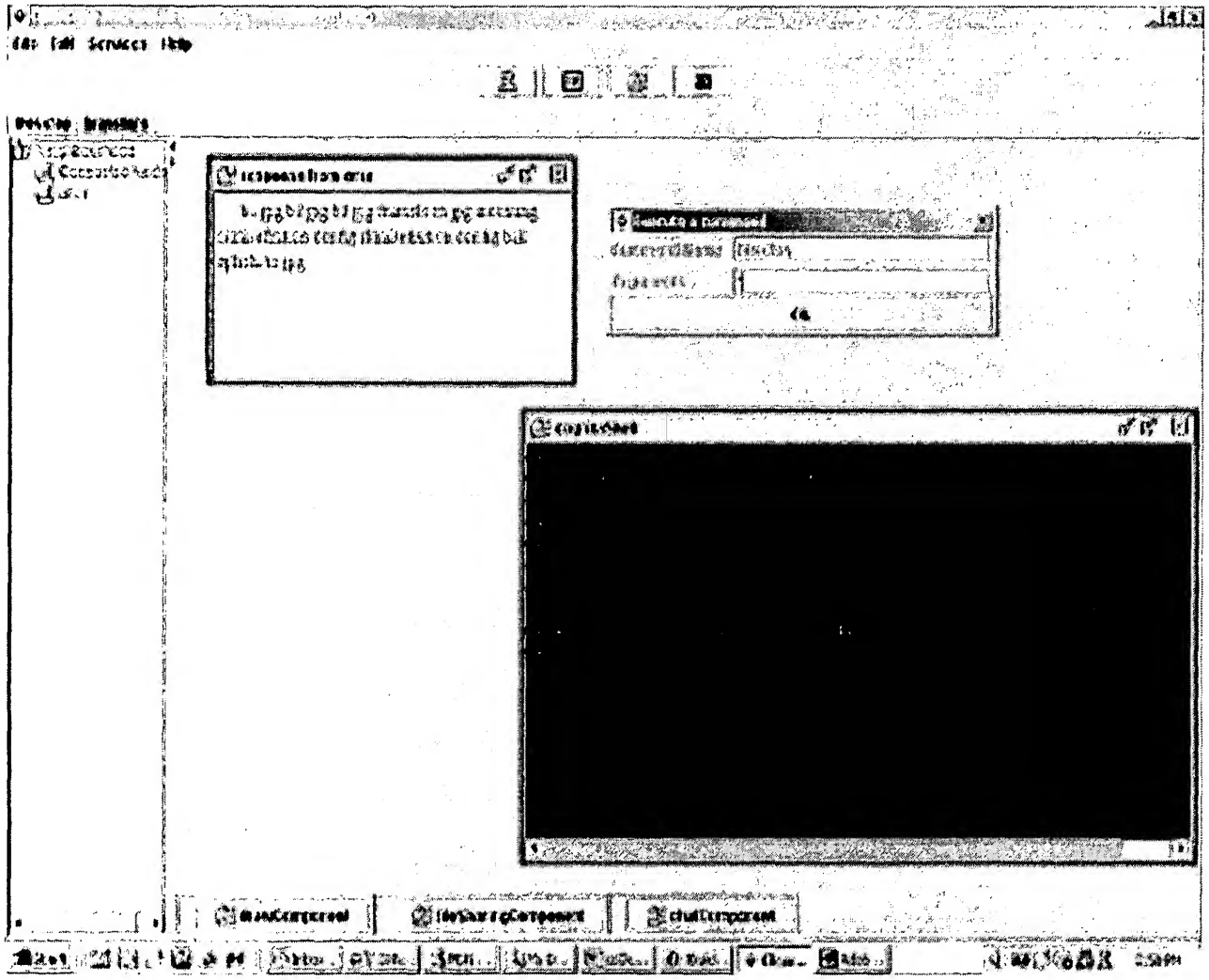

Figure 26

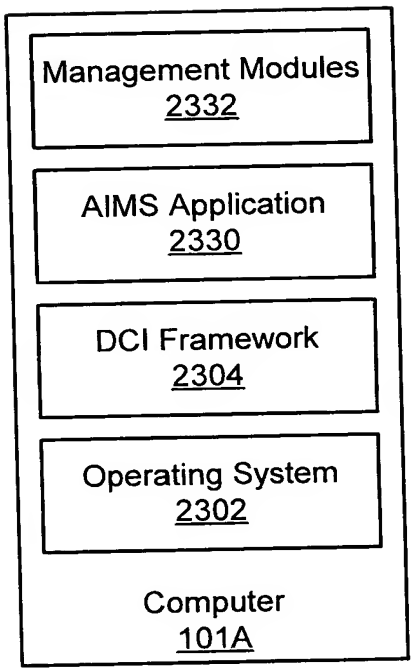
Management Modules
2332
AIMS Application
2330
DCI Framework
2304
Operating System
2302
Computer
101A

Figure 27